

CLAIMS

1. A heat exchanger plate (1) comprising a number of
5 turbulence-promoting protuberances (4) which project from
the plane (3) of the heat exchanger plate, c h a r a c -
t e r i s e d in that

the protuberances (4) have a surface profile (6)
for promoting break-up of laminar boundary layers, and
10 the surface profile (6) consists of spherical or
ellipsoid segments.

2. A heat exchanger plate (1) as claimed in claim
1, which together with a plurality of identical heat
exchanger plates (1) is stackable in such a manner that
15 the protuberances (4) in a first heat exchanger plate (1)
are partially accommodated in the protuberances (4) in a
second heat exchanger plate (1).

3. A heat exchanger plate (1) as claimed in claim
1, in which the protuberances (4) are symmetrically
20 arranged.

4. A heat exchanger plate (1) as claimed in claim
1, in which the surface profile (6) has a profile depth
that is considerably smaller than the depth of the pro-
tuberances (4).

5. A heat exchanger plate (1) as claimed in claim 1,
25 in which the surface profile (6) is concavely or convexly
arranged relative to the protuberances (4).

6. A heat exchanger plate (1) as claimed in claim 1,
in which the geometric transition between the plane (3)
30 of the heat exchanger plate (1) and the protuberances (4)
is provided with a radius.

7. A heat exchanger plate (1) as claimed in claim 1,
in which the surface profile (6) together with the protu-
berances (4) forms a golf-ball-like structure.

8. A plate heat exchanger comprising heat exchanger
35 plates (1) with turbulence-promoting protuberances (4)

which are arranged in each heat exchanger plate (1),
c h a r a c t e r i s e d in that

each protuberance (4) has a surface profile (6) for
promoting break-up of laminar boundary layers, said sur-
5 face profile (6) consisting of spherical or ellipsoid
segments.

9. A plate heat exchanger as claimed in claim 8, in
which the heat exchanger plates (1) are arranged so that
the protuberances (4) in a first heat exchanger plate (1)
10 in connection with stacking are partially accommodated in
the protuberances (4) in a second heat exchanger plate
(1).

10. A plate heat exchanger as claimed in claim 8,
in which the heat exchanger plates (1) are arranged in
15 pairs with a first (10) pair of plates and a second (10')
pair of plates adjoining the first, in which pairs of
plates (10, 10') a first (1A) and a second (1B) plate
are arranged with the protuberances (4) directed away
from each other and in which pairs of plates a gap is
20 arranged between the first (1A) and the second (1B)
plate.

11. A plate heat exchanger as claimed in claim 8,
in which the protuberances (4) in each heat exchanger
plate (1) are symmetrically arranged.

25 12. A plate heat exchanger as claimed in claim 8,
in which the surface profile (6) has a profile depth
which is considerably smaller than the depth of the
protuberances (4).

13. A plate heat exchanger as claimed in claim 8,
30 in which the surface profile (6) of each protuberance
(4) is concavely or convexly arranged relative to the
protuberance (4).

14. A plate heat exchanger as claimed in claim 8,
in which the protuberances (4) together with the surface
35 profile (6) form a golf-ball-like structure.